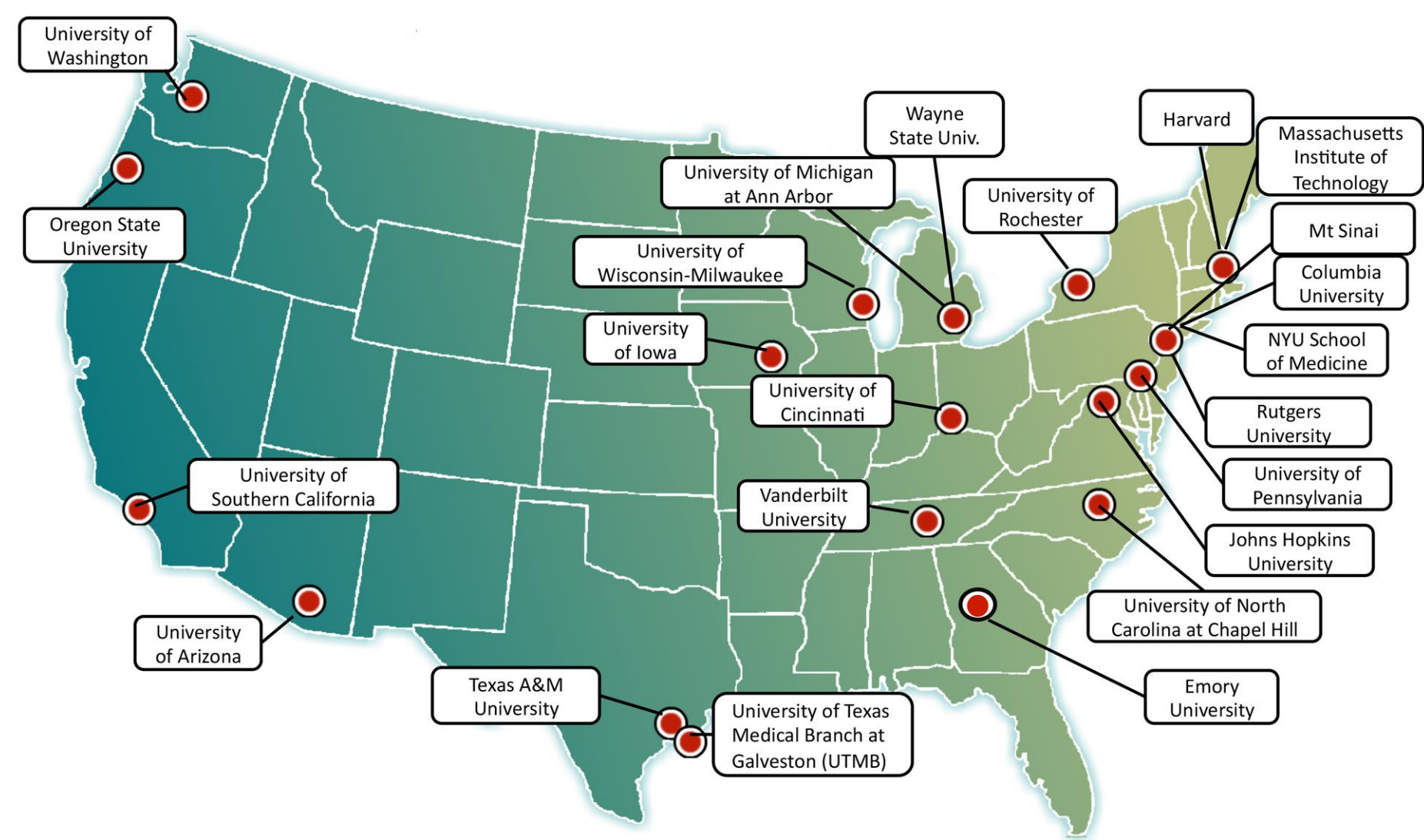


Using Portfolio Analysis Strategies to Inform an Evaluation of the NIEHS P30 Core Centers Program

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NIEHS Core Centers



History of the Environmental Health Sciences Core Centers

NIEHS has funded the Environmental Health Sciences Core Centers P30 Program since the 1960s.

The Program provides funding for institutional infrastructure to support scientific equipment, facilities, and other resources shared among researchers tackling related environmental health questions.

The Centers foster interactions among researchers to allow them to take advantage of innovations and approaches beyond what individual scientists would be likely to attain by working independently.

Analysis of Strategic Plan Goals

Since 2012 NIEHS has coded every active grant for more than 500 characteristics in 10 overarching categories, including strategic plan goal.

To assess the degree to which the Centers support research that addresses the NIEHS strategic plan, we analyzed other NIEHS funding supported by Center members.

We then compared the distribution of strategic plan goals addressed by Core Center supported research versus the entire NIEHS extramural portfolio.

Centers are required to document related research obtained from NIEHS in their funding applications in supplemental tables.

For this evaluation, we reviewed these tables for applications submitted between 2011 and 2015, and identified 138 NIEHS grants obtained by Core Center members.

Publication/Journal Analysis

The Core Centers program supports infrastructure and therefore limits our ability to use bibliometric portfolio analysis tools.

One of our strategies for addressing this challenge is to analyze the scientific research that is supported by the Centers, specifically the publications connected to these grants supported by the Centers.

Assuming that publishing more articles in General Interest Journals will lead to a broader audience for environmental health science research, we examined the change in the number of General Interest journal publications from 2003 to 2013.

Preliminary Publication/Journal Analysis Findings

Core Centers seem to have published in fewer General Interest Journals in 2013 compared to 2003.

We defined General Interest Journals using the following criteria:

- Journal included 3 or more Subject Categories
- Journal had an impact factor of 10 or more
- Journal Subject Category included Multi-Disciplinary and Medical General Interest

Reported Core Center Publications			
	2003	2013	Total
Total Journals	727	612	1078
Total General Interest Journals	57 (8%)	49 (8%)	61 (6%)
Total Publications	2000	1588	3588
Number of Publications in General Interest Journals	514 (25%)	365 (23%)	879 (24%)

We Observed an Increase in the Number of Publications in only 9 General Interest Journals

Journal	General Interest Journal Criteria			2003	Increase from 2003 to 2013	
	Impact Factor of 10+	3 Subject Categories	Multi-Disciplinary or Medical General Interest		2013	2003 to 2013
PLoS One <i>(launched in 2006)</i>	Yes	Yes			99	99
J Expo Sci Environ Epidemiol	Yes	Yes			14	14
Neurotoxicology		Yes		3	11	8
ACS Nano	Yes	Yes			6	6
Nat Commun			Yes		5	5
Methods Mol Biol	Yes			7	11	4
J Allergy Clin Immunol	Yes			10	12	2
Nat Genet	Yes			6	8	2
Chem Res Toxicol		Yes		23	24	1
Physiol Genomics		Yes		2	3	1

Preliminary Analysis of Strategic Plan Goals Addressed by Core Center Supported Grants

The distribution of reported research grants across the strategic plan goals matches the overall distribution of all NIEHS R01s funded in FY2012, but do show a very small increase over the general portfolio in grants that address that Goals 4, 5 and 6.

Strategic Plan Goal	Core Center		NIEHS FY2012	
	Grants		R01s	
1. Fundamental mechanisms	74	54%	292	56%
2. Individual susceptibility	29	21%	113	22%
3. Exposure science	14	10%	59	11%
4. Combined environmental exposures	5	4%	21	4%
5. Emerging health threats	6	4%	5	1%
6. Health disparities	3	2%	17	3%
7. Knowledge management	3	2%	11	2%
8. Teaching, education and training	0	0%	2	0%
9. Training new research scientists	2	1%	0	1%
10. Economic impacts	0	0%	0	0%
11. Bidirectional communication	2	1%	1	0%
Total	138		521	

Discussion Questions

What Portfolio Analysis tools do you use to evaluate infrastructure/centers programs?

Is there a critical number of publications necessary for bibliometric analysis?

What do we miss by analyzing only the grants supported by NIEHS?

How do you balance data collection and reporting needs with grantee response burden?

Are there other Portfolio Analysis tools we should consider using?